

Abstract

A revolving piston rotary toroidal cylinder valved expandable chamber device, compressor and engine machine system with an outer toroidal cylinder housing assembly having a central axis, having one or a plurality of balanced pistons with means for attachment to a rotor and radiating through the outer rotor assembly to contact the interior surface of the outer housing at the other extreme of the pistons, whereby, a plurality of relatively air tight compartments are formed between the interior surface of the outer housing, the outer surface of the rotor assembly and the piston or plurality of pistons with the volume of said compartment varying as a function of the rotative position of the inner cylinder and rotor assembly in relation to the isolating valve. The rotary device can be used as a compressor having a inlet for receiving air and an outlet for providing compressed air. The rotary device can also have an inlet for receiving working fluid and an exhaust port for venting working fluid, a combustor for burning combustible fluids. The combustor (combustion chamber) can also heat an expansion gas or fluid which are introduced and or mixed within the combustor simultaneously.

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